

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU2004/000363

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. 7: A62C 2/08, 31/24

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DWPI - IPC A62C 2/08, 31/24 & keywords (sprinkler, heat) and like terms

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 1620142 A (THOMPSON) 8 March 1927 See whole document	1-10
X	US 1831880 A (PIERCE) 17 November 1931 Pg 1 lines 10-16 Pg 3 lines 21-41	1-10
X	GB 2360703 A (SHEN) 3 October 2001 Abstract, figures	1-10
X	WO 2003/022362 A1 (DB STATION & SERVICE) 20 March 2003 Abstract, figure 1	1-10

☒ Further documents are listed in the continuation of Box C

☒ See patent family annex

* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
20 May 2004

Date of mailing of the international search report 27 MAY 2004

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Derwent Abstract Accession No. 2002-593935/64, Class P35, JP 20022153570 A (TSUJI N) 28 May 2002	1-10
X	Derwent Abstract Accession No. 99-135965/12, Class P35, JP 11004902 A (BUNKA SHUTTER) 12 January 1999	1-10

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Box No. II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. Claims 1 to 10
A fire fighting apparatus with sprinklers mounted on a structure to form a radiant heat barrier of fluid droplets.
2. Claims 11 to 22 and 35
A sprinkler head for use in forming a radiant heat barrier of fluid droplets.
3. Claims 23 to 30
A fire fighting apparatus for use with a sprinkler, apparatus including a fire retardant supply and a proportioning means.
as reasoned on the extra sheet.
1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-10.

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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Supplemental Box

(To be used when the space in any of Boxes I to VIII is not sufficient)

Continuation of Box No III:

The different inventions are:

1. Claims 1 to 10 are directed to a fire fighting apparatus with sprinklers mounted in the region of a structure to form a radiant heat barrier of fluid droplets. It is considered that the radiant heat barrier of fluid droplets comprises a first "special technical feature".
2. Claims 11 to 22 and 35 are directed to a sprinkler head for use in forming a radiant heat barrier of fluid droplets, including at least one radial arm with tangential extensions that pivots to spray the fire fighting fluid. It is considered that the at least one radial arm comprises a second special technical feature.
3. Claims 23 to 30 are directed to a fire fighting apparatus for use with a sprinkler, the apparatus including a fire retardant supply and a proportioning means to deliver the fire retardant in a controlled concentration. It is considered that the fire retardant supply and proportioning means comprises a third special technical feature.

Claims 31 to 34 each define more than one invention within each claim, and as such, the scope of each claim is not clear.

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Information on patent family members

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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member	
US	1620142		
US	1831880		
GB	2360703	DE	10017377
WO	03022362	DE	10145136
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.			
END OF ANNEX			